



Michael F. Easley  
Governor

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William G. Ross Jr.  
Secretary, DENR

# EE RANKS HIGH IN NC SURVEY

By CHARLIE PEEK  
Public Information Officer

A surprising 86.5 percent of North Carolinians want to know more about the environmental consequences of their everyday decisions, and 94.3 percent feel environmental education should be taught in the state's schools.

Those are some of the results of a survey completed recently under the direction of the nonprofit Environmental Education Fund. The results were announced at a ceremony in Raleigh Aug. 13. The effort was funded by grants from the Z. Smith Reynolds Foundation and the Environmental Protection Agency.

The survey results show that people aren't too familiar with environmental education infrastructure and want to know more, Richard Whisnant, board member with the Environmental Education Fund, said.

"We think some of the results are very challenging, and some will not sit that well with some people and some are going to make us re-think the things we do," Whisnant said.

An example is the finding that citizens rely most on media to get information on the environment (62.3 percent), especially television (57 percent), he said.

People were also anxious to talk about the environment and about environmental education, said Paula Harrell, director of the Survey Research Laboratory at East Carolina University, which contracted for the work.

"We had more people willing to work on



*ENVIRONMENTAL EDUCATION IN THE STATE PARKS SYSTEM TAKES MANY FORMS.*

this project than we ever anticipated," she said.

The survey team hoped to get 1,500 responses from a cross-section of North Carolina citizens, but got 1,641 and finished their work early. The telephone response rate of 64 percent surpassed the 50 percent "considered normal," she said.

Other findings of the survey were:

- β 64.8 percent feel environmental education and regulation are equally important.
- β 53.3 percent feel the state is not spending

*CONTINUED ON PAGE 2*

**Department of Environment and Natural Resources**

enough money on the environment.

- β 65.3 percent are not familiar with environmental education centers and opportunities.

- β 27.8 percent feel direct mailings are the best way to tell people about environmental education programs.

Another 27.1 percent feel

television is the best method.

In coastal areas of the state, respondents feel that polluted runoff is the most significant environmental problem. In the mountains and piedmont, air quality is their biggest concern.

Marti Kane, who directs the interpretation and education programs for the parks system, said the survey

results are a “powerful confirmation” of the system’s emphasis on those programs as a top priority.

“It tells me that the citizens of North Carolina strongly support what we are trying to do in state parks to educate the general public with our programming, exhibits, brochures and website,” she said.

The interest in environmental education in schools should prompt state parks to put more time and effort into developing and updating activity guides for Environmental Education Learning Experiences (EELEs), Kane said.

“Although many schools cannot take field trips to our state parks, teachers are interested in using our environmental education materials,” she said. “I think it’s very important that we make all our EELE materials readily accessible to teachers with our website. We also need to develop a variety of other website resources such as digital video clips, virtual field trips and the like.”

Harrell said that ECU is preparing a similar survey of North Carolina’s schoolteachers and educators, and results of that should be available about November.

## From The Director's Desk

Dear fellow employees:

A letter to the editor of The Pamlico News that recently crossed my desk came from a gentleman opposing any cuts in the budget for state parks. His reasoning, in part, was that “cuts in our state parks’ budget are cuts in education.” And, state officials have been trying to avoid such cuts in educational programs as much as possible.

Apparently this person is in good company in his belief that environmental education – as practiced by this Division and others within DENR – is valuable to North Carolinians. A remarkable 86.5 percent of citizens responding to a recent survey want to know more about the environmental consequences of their everyday decisions, according to a report detailed in The Steward this month. In addition, 94.3 percent of North Carolinians feel environmental education should be part of the schools’ curriculum.

It’s gratifying to hear that kind of validation for what the parks system has been doing for decades – teaching folks why their environment is important and how to take better care of it. It’s a core element of our mission that is manifested in the new exhibit halls, trails and trail displays, workshops and the more formal, curriculum-based activities for youngsters. On a more basic level, each of our rangers has an opportunity almost every day to teach someone something new or to show them a new way of thinking about what they’ve seen. It’s often these little exchanges that make both the visitors and the rangers look forward to coming back to the park.

It’s nice to know that, on occasion, our efforts are appreciated.

Sincerely,

**Phil**

Philip K. McKnelly

## REMEMBER. . .

*TO KEEP US UP TO DATE  
ON WHAT'S HAPPENING  
IN YOUR PARK. SEND  
YOUR SUBMISSIONS TO  
THE STEWARD.*

# AMEN CORNER

*THE FOLLOWING WAS SENT TO DAVE COOK, SUPERINTENDENT AT ENO RIVER STATE PARK. HAVE YOU HEARD MORE KIND WORDS RECENTLY ABOUT THE DIVISION AND ITS EMPLOYEES? SEND THEM ALONG TO THE STEWARD.*

Dear Superintendent Cook:

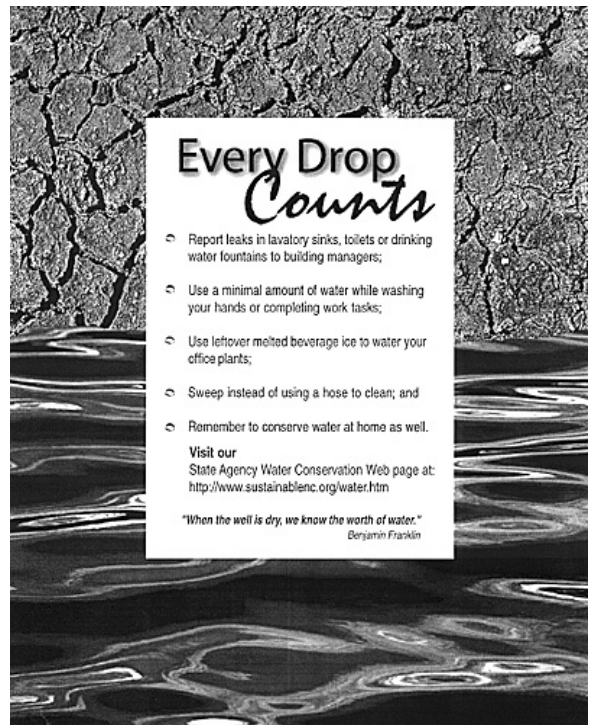
The purpose of this letter is to express our appreciation for an outstanding job done by Adrienne Wallace, a park ranger and water quality specialist for the Eno River State Park. My daughter Lauren Peterson is an eighth grade student who has been working with Adrienne once a week for the past seven weeks on a water quality research project for school.

When my daughter was a fourth grade student at Durham Academy, her class participated in a water quality field trip at the Eno River. That field trip sparked Lauren's interest in marine and freshwater biology that continues to this day. . .

Adrienne was very prompt about contacting Lauren when she inquired initially about doing her project in the park, and Adrienne also sent Lauren some information about macroinvertebrates so she could begin learning to identify them. I could not have asked for a better mentor than Adrienne Wallace. Adrienne instinctively knew when and how to help my daughter and when to allow her to perform tests independently but with supervision. She was generous with her time for water testing at two different sites within the park, answering questions about sources of information, and Adrienne was also interviewed for the project.

As parents, we are especially grateful that our daughter was able to work with such a positive role model. Adrienne Wallace exemplifies professionalism and strength and yet she is also friendly and gracious. She is knowledgeable and enthusiastic about the scientific aspects of the Eno River and does an excellent job of teaching others how to enjoy and respect it. It is becoming harder to find positive role models for a teenage daughter, and we are so grateful to Adrienne for her willingness to be that person. We also applaud the program within the Eno River State Park that would allow Adrienne to devote the time to students and programs that encourage people to learn about the Eno River and the importance of protecting it. . .

Sarah and Paul Peterson



## DROUGHT CAMPAIGN

*AS PART OF A STATEWIDE DROUGHT AWARENESS CAMPAIGN, THIS POSTER WITH ITS LIST OF TIPS FOR SAVING WATER HAS BEEN POSTED IN ALL STATE PARKS AND DENR OFFICES.*

## COMBINED CAMPAIGN READY FOR KICKOFF

The annual State Employees Combined Campaign is kicking off in September. The campaign gives state employees the opportunity to conveniently and collectively contribute to charitable organizations. Employees can automatically deduct a monthly donation to the charity of their choice through their paychecks, or they can give a one-time donation by writing a check or giving cash.

The NC Division of Parks and Recreation campaign contacts are Pam Stevers and Jennifer Goss. Employees will be receiving campaign contribution forms, along with booklets that describe eligible charities, through the mail in September. The deadline for contributions is in October; details about giving are included on the contribution form. Completed forms can be mailed to either Stevers at the Archdale Building or Goss at the Yorkshire Center.

Last year, the NC Department of Environment and Natural Resources raised \$87,889 for the campaign, down from \$102,458 in 2000.



# ***DROUGHT UNCOVERS RARE PLANTS***

By CHARLIE PEEK  
Public Information Officer

Although an extreme drought this year has been a hardship for plants, animals and humans throughout North Carolina, it has helped lead to the discovery of important rare plant communities at Carolina Beach State Park in New Hanover County.

Discoveries in the extremely dry landscape of the park this summer include savannah milkweed, a species listed on the state's "significantly rare" list that had not been seen in the park before, and two species – screwstem bartonia and narrow-fruit horned beaksedge – that had never before been reported in New Hanover County. Two more found species – wrinkled jointgrass and Wright's beaksedge – had not been reported in the county in more than 20 years.

The latter four species are on a state "watch list" which indicates they may be or could soon be considered rare and listed as such.

Richard LeBlond, a botanist with the state's Natural Heritage Program, explains that worsening drought conditions have left a series of shallow limesink ponds exposed for an extended period. Some of the most significant findings were on land leased to the park in a buffer zone of the U.S. Army's Military Ocean Terminal Sunny Point (MOTSU).

"A consequence of the current drought is that it has exposed the entire basin of most of the ponds, resulting in the growth not only of more individual plants, but also more species," LeBlond said. "The plants in this habitat don't go away when conditions aren't right; they become dormant, either as seeds or in underground roots and tubers."

Water levels rise and fall seasonally in the ponds known as limesinks or depressional wetlands, LeBlond said. The ponds develop in areas where sandy soil overlays limestone. Over time, solution pits occur in the underground limestone and the sand at ground level sinks to fill those underground pits

forming depressions. Wherever the depressions intersect the groundwater table, a seasonal or permanent pond forms.

At Carolina Beach State Park, some of these depressions are filled with groundwater throughout years of normal rainfall, while others may fill only in winter and spring.

This summer, drought conditions also coincided with an inventory of rare plants and animals in New Hanover County being conducted by LeBlond for the NC Natural Heritage Program. For more than two decades, the program has systematically catalogued rare plant and animal species throughout the state. The results are useful in local planning initiatives and, for the state parks system, can help with the management of sensitive areas.

LeBlond said that the state park's limesink ponds have yielded a remarkable diversity of plant species. Twelve species recognized as "significantly rare" in North Carolina have been found, and one of them, coastal beaksedge, is extremely rare, found at fewer than 25 sites throughout its North Carolina-to-Alabama range.

"These small, wet depressions are also very critical for frogs, toads and salamanders, which are dependent on fish-free, seasonal pools for breeding success," LeBlond said.

Park rangers are familiarizing themselves with the growing list of rare species discovered there. Eventually, the information will be folded into interpretive programs that rangers present to park visitors.



*LEBLOND, KNEELING, EXAMINES PLANTS WITH CAROLINA BEACH STAFF.*

# STUDENTS READY TO AID PETTIGREW

When a state park is located in a very rural area, one would think that the pool of volunteers would be small.

Pettigrew State Park is located in the least populated area of North Carolina, but has benefited from hundreds of student volunteers from one of the state's smallest high schools. Just in the 2001-02 school year, Creswell High School supplied 53 students who volunteered more than 1,400 hours at Pettigrew.

The student volunteer program started in 1994. The school's environmental/earth science teacher Vickie Furlough began to require students to complete a science project every grading period with an option of volunteering six hours at Pettigrew. Naturally, most students opted to volunteer at the state park even though it meant giving up some of their Saturdays.

The work involved was not always the typical "volunteer fun work." Students removed trash, especially in Lake Phelps, cleaned restrooms and shoveled dirt. Since so many students worked, the park



*STUDENT VOLUNTEERS REPLACE DUCK BOXES AT PETTIGREW STATE PARK.*

was allowed to tackle large, tedious projects.

This year, students cleaned vegetation from canals, removed more than a ton of junk, prepared fire lanes for a prescribed burn and moved dirt to fortify facilities near a canal bank.

Over the years, students have helped with special events, painted facilities, helped construct a bike trail, planted trees and shrubs, and gathered seeds and plants for the park's

native plant nursery. One of the more unusual jobs was cleaning animal skulls for a park collection.

+Furlough's purpose for the program was to get students to learn about local natural areas that they would not otherwise see. "It is surprising how many local residents have not seen the unique natural areas near their homes," she said.

For some students, it was their first experience at physical labor, and some students' attitudes have changed toward their environment and their community since working at the park, Mrs. Furlough said. "They will have the responsibility to take care of the environment in the future."

Pettigrew State Park Superintendent Sid Shearin said, "We hope that the students will have a little more pride in their park and become good stewards of their natural resources in the future. They are our future leaders."



*IN THE LAST SCHOOL YEAR, STUDENTS FROM CRESWELL HIGH SCHOOL VOLUNTEERED MORE THAN 1,400 HOURS AT THE PARK.*

# THE 'ROCK' PROTECTED FROM TOWERS

By TAMARA WARD  
Publications Coordinator

Imagine the view from Hanging Rock on an autumn morning, the changing leaves a kaleidoscope of color all around. There's the Dan River valley with gently rolling hills beyond, and in the distance the Blue Ridge Mountains. Now, in the middle of the scene, imagine a 100-foot communications tower topped with a blinking light. It wouldn't be a picturesque vista anymore.

But no communications tower will come near Hanging Rock State Park, thanks to a joint effort of the Stokes County Planning and Zoning Department and the park that resulted in restrictions on tower locations in the county. Hanging Rock is the first state park in the division to work with a county government to establish such viewshed protections.

The new rules ban towers within one mile of park boundaries and within 500 feet of the top of Brown Mountain, a prominent focal point within Hanging Rock's viewshed. Should a cellular communications company want to construct a tower within two to three miles of the state park boundaries, its request must be reviewed by the Hanging Rock State Park advisory committee for recommendation to the county's planning board.

Then, reviewing the recommendation of the planning board, the Stokes County Board of Commissioners would make a final decision on the tower's location. There are other requirements, including placing communications systems on existing structures when possible.

"People are starting to realize the detrimental view a

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## *STOKES COUNTY SETS NEW LIMITS ON BUILD- ING CELLTOWERS WITHIN VIEWSHED OF HANGING ROCK STATE PARK.*

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tower can give," said Tommy Wagoner, superintendent at Hanging Rock. He said that includes representatives of cellular companies.

The effort to protect the park's viewshed began in 1999 when David Sudderth, director of the county's planning and zoning department, asked park officials what concerns they would have with towers affecting scenic views.

"It didn't surprise me that the county asked for the park's input because this county has a very strong feeling of protection for this park," said Wagoner. "(Hanging Rock) means a lot to them from the perspective of tourism.

"This park had a history, long before I came, of working closely with county government with any situation that occurs. It's not something that can be taken for granted."

Sue Regier, the division's resource management program head, sent Sudderth a letter explaining the division's desire to minimize the negative effects towers would have on the park's viewshed. The letter said that the park preferred that towers not be visible from within its boundaries. But, if that were not possible, the park would want the towers further away or on edges of vistas.

The park advisory committee then evaluated the scenic views from eight overlooks

in the park, including Hanging Rock, Moore's Wall and Cook's Wall. The value of the views was measured using the Scenic Quality Analysis System adopted from a method the Blue Ridge Parkway used to evaluate and protect its own viewsheds. The method analyzes views by rating a number of qualities, including the view's strength or memorability, uniqueness, expansiveness, framing and focal point. The findings then were forwarded to the county office.

Although the park originally requested towers to be at least five miles from park boundaries, officials determined that restriction would not be feasible due to the small size of the county. So, the park compromised to the current plan adopted in May.

"(Sudderth) deserves a lot of credit for it," said Wagoner, "because it wouldn't have happened without him."

Wagoner said that Sudderth not only took the initiative in contacting the park and in protecting Brown Mountain's upper reaches, he also spoke with the park's advisory committee, explaining that to have adequate cellular coverage the towers did not need to be built on the highest peaks. Sudderth even hiked to Hanging Rock to examine the viewshed personally.

"He actually came up with one or two staff members," said Wagoner. "They came up and hiked to the views and looked at them themselves so they could better understand the impact."

Although there are no current requests for a cellular tower in the county, Wagoner predicts it won't be long before the first tower is built.



# NORTH CAROLINA STATE PARKS

## MONTHLY ATTENDANCE REPORT

### JULY 2002

PARK	JULY 2002	TOTAL YTD JULY 2002	JULY 2001	TOTAL YTD JULY 2001	% CHANGE (2001/2002)	
					JULY	YTD
CAROLINA BEACH	31,720	146,419	35,380	156,186	-10%	-6%
CLIFFS OF THE NEUSE	20,498	88,023	21,374	83,396	-4%	6%
CROWDER'S MOUNTAIN	26,159	186,017	26,737	158,842	-2%	17%
ENO RIVER	30,369	189,088	31,451	190,333	-3%	-1%
OCCONEECHEE MOUNTAIN	3,111	20,566	3,255	22,109	-4%	-7%
FALLS LAKE	159,194	812,055	127,151	821,376	25%	-1%
FORT FISHER	128,357	676,857	112,608	431,634	14%	57%
FORT MACON	218,952	873,690	200,432	812,628	9%	8%
GOOSE CREEK	14,862	89,616	11,862	70,792	25%	27%
GORGES	31,913	98,106	15,293	55,785	109%	76%
HAMMOCKS BEACH	30,279	121,714	32,061	117,712	-6%	3%
HANGING ROCK	61,339	252,905	62,436	247,094	-2%	2%
JOCKEY'S RIDGE	170,409	613,578	189,169	621,158	-10%	-1%
JONES LAKE	17,200	64,836	20,568	83,700	-16%	-23%
JORDAN LAKE	177,505	1,093,810	181,700	810,756	-2%	35%
KERR LAKE	255,192	1,129,520	260,512	928,844	-2%	22%
LAKE JAMES	43,610	188,160	41,949	172,721	4%	9%
LAKE NORMAN	48,228	236,270	38,484	142,758	25%	66%
LAKE WACCAMAW	12,036	68,356	16,692	68,882	-28%	-1%
LUMBER RIVER	5,500	30,292	3,425	30,391	61%	0%
MEDOC MOUNTAIN	11,338	44,682	9,567	41,287	19%	8%
MERCHANT'S MILLPOND	8,033	58,764	7,921	54,011	1%	9%
MORROW MOUNTAIN	46,810	279,370	69,320	307,560	-32%	-9%
MOUNT JEFFERSON	14,520	54,336	12,160	50,921	19%	7%
MOUNT MITCHELL	97,859	297,387	85,672	273,049	14%	9%
NEW RIVER	21,972	93,135	21,811	73,291	1%	27%
PETTIGREW	9,600	50,188	8,403	58,368	14%	-14%
PILOT MOUNTAIN	43,219	229,498	52,418	234,798	-18%	-2%
RAVEN ROCK	9,475	70,157	11,558	72,153	-18%	-3%
SINGLETARY LAKE	3,452	12,773	1,890	7,638	83%	67%
SOUTH MOUNTAINS	21,245	103,587	20,828	120,048	2%	-14%
STONE MOUNTAIN	56,976	269,975	58,868	293,902	-3%	-8%
WEYMOUTH WOODS	2,237	17,295	2,241	15,275	0%	13%
WILLIAM B. UMSTEAD	43,848	254,429	45,930	235,347	-5%	8%
SYSTEMWIDE TOTAL	1,877,017	8,815,454	1,841,126	7,864,745	2%	12%

# SHORTS KEEPING 'EM COOLER DOWN EAST

A new uniform guideline allowing rangers to wear shorts was approved in June by Lewis Ledford, superintendent of state parks. Under the guideline, with the approval of the park's superintendent and district superintendent, rangers are allowed to wear shorts as part of their summer uniforms.

After the guideline was approved, East District Superintendent William Berry approved the change for parks under his jurisdiction. So far, rangers are wearing shorts at Fort Macon, Hammocks Beach and Jockey's Ridge state parks.

Berry said that he made the decision to allow shorts after accepting requests from park superintendents and taking another look at the guideline. He said park superintendents requested shorts for comfort, practicality and safety reasons.

"It's the prerogative of the district superintendent to allow shorts in his or her district," Berry said. "The (park) superintendents made a good case. My decision was based on the information they sent me."

The guideline places limitations on when rangers can wear shorts. Rangers can wear uniform shorts when they are performing general park operational duties, environmental programs and law enforcement patrols within the park or on immediately adjacent areas.

Uniform shorts cannot be worn to official meetings or formal presentations, or anytime during the winter uniform season. Rangers also cannot wear shorts when they are traveling in uniform. Under the guideline, rangers must wear long pants



*RANGER MATTHEW WINDSOR AT FORT MACON*

during the summer uniform season when they are needed for safety. The park superintendent determines what activities, such as weed-eating and operating a chainsaw, require the protection of slacks.

"To date we've gotten a lot of positive comments from the visiting public," Fort Macon Superintendent Jody Merritt said. "Some of the comments are 'It's about time,' and that the rangers do look professional in the uniforms."

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## Mission

The mission of the North Carolina Division of Parks & Recreation is:



- to protect North Carolina's natural diversity;
- to provide and promote outdoor recreation opportunities throughout North Carolina;
- and
- to exemplify and encourage good stewardship of North Carolina's natural resources

for all citizens and visitors of North Carolina.

*The Steward*

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